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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,704	08/19/2003	Wendell C. Hull	31091-1001	6701

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PEACOCK MYERS, P.C.
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ALBUQUERQUE, NM 87102

EXAMINER	
RIVELL, JOHN A	

ART UNIT	PAPER NUMBER
3753	

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/644,704	HULL ET AL.	
	Examiner	Art Unit	
	John Rivell	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/5/05 (amendment)*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,42-68 and 70-93* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,42-68 and 70-82* is/are allowed.

6)☒ Claim(s) *83-92* is/are rejected.

7)☒ Claim(s) *93* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's arguments filed December 5, 2005 have been fully considered but they are not persuasive.

Claims 2-41 and 69 have been canceled. Claims 1, 42-68 and 70-93 remain pending.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 83-86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius in view of Pulling.

The specific recitation of "... for controlling the flow of a gas" is considered to be a statement of intended use bearing no patentable weight. Moreover, while Cornelius explicitly discloses the fluid to be a liquid, especially water, the valve device therein is clearly capable of functioning as disclosed in a gaseous environment. Pulling is disclosed foe use in a "fluid" environment which is considered to be inclusive of both gasses and liquids.

The patent to Cornelius discloses "an apparatus for regulating the flow of a (fluid) between a high-pressure zone (e.g. the inlet at 2) and a zone of lower pressure (e.g. the outlet at 10), said apparatus comprising; a hollow body (generally at 11) having an axis;

a first chamber (at inlet 2) defining at least in part a high-pressure zone and a second chamber (outlet 10 at 16), said chambers defined within said body; a nozzle (read on the smallest cross section of valve seat 19) within said body and separating said chambers, said nozzle defining a passage for the passage of (fluid) between said chambers; and a stem (44, 45, 46) movable axially within said passage and comprising: a distal portion (at 46 and attached element 49) extending at least partially into said first (inlet) chamber; a proximate portion (the remainder of stem 44, 45) within said second chamber (at 16) and extending into said passage (at seat 19), wherein axial movement of said stem varies the position of said proximate portion in relation to said nozzle (seat 19); (a seal 49) seat between said proximate portion and said distal portion of said stem and contactable with said nozzle (19) to seal said passage against the passage of (fluid); wherein said distal portion (at 49) is removably connectable to said proximate portion of said stem (by the illustrated threaded connection between the blind end bore within element 49 and the externally threaded end 46 of the stem 44) and wherein, when connected, said distal portion and said proximate portion define an annular pocket for receiving said (seal 49)...; and wherein further said proximate portion (at 44, 45) is separated from said first (inlet) chamber (2) by said distal portion (46 and 49) and said (seal 49) whereby to isolate said (annular chamber receiving the seal 49) from said high-pressure zone" as recited in claim 83.

Thus the patent to Cornelius discloses all the claimed features with the exception of having specifically "an o-ring seat between said proximate portion and said distal portion of said stem and contactable with said nozzle to seal said passage against the passage of gas" and the "distal portion and said proximate portion (defining) an annular pocket for receiving said o-ring seat, said pocket having a void radially inward from said

o-ring seat and between said seat and said stem" which "void" is isolated from the high-pressure zone.

The patent to Pulling discloses that it is known in the art to employ an o-ring seat 9, between a proximate portion 2 and a distal portion 4 of a valve stem and contactable with a nozzle or fluid passageway within seat 5 to seal the passage against the passage of fluid, wherein the distal portion 4 is removably connectable to the proximate portion 4 of the stem by a threaded connection at shank 3, wherein, when connected, the distal portion and the proximate portion define an annular pocket by grooves 7 and 8 for receiving the o-ring seat 9 for the purpose of perfecting fluid tight closure of the valve head against the valve seat.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Cornelius specifically an o-ring seat between the proximate portion 49 and the distal portion 45 of the stem 44, 45, 46, 49 and contactable with the nozzle 19 to seal the passage against the passage of gas wherein the distal portion is removably connectable to the proximate portion of the stem 22 and wherein, when connected, the distal portion and the proximate portion define an annular pocket for receiving an o-ring seat for the purpose of perfecting fluid tight closure of the valve head against the valve seat as recognized by Pulling. The resultant "void" will be isolated from the high-pressure zone by the fact that the proximate portion 49 of the stem has a blind bore not exposed to fluid pressure in the inlet.

Regarding claim 84, in Pulling, "said distal portion and said proximate portion (of the valve head) have a screwed engagement, and wherein when fully engaged said distal portion and said proximate portion squeeze said seat (ring 9) and capture said seat within said pocket" as recited.

Regarding claim 85, in Pulling, "less than one third of the toroidal circumference of said seat (9) is exposed outside said pocket" as recited.

Regarding claim 86, the recitations concerning percentages of cross sectional area of the seat and pocket, with the pocket area is larger than the area of the seat, are considered to be obvious design expedients in view of the respective areas shown in Pulling and in view of the fact that the area of the pocket is determined by how far the two elements are threaded together.

Claim 87 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius in view of Pulling as applied to claims 83-86 above, further in view of Whitener.

The patent to Cornelius, as modified by Pulling, discloses all the claimed features with the exception of having "a vent hole" in the seal pocket to balance fluid pressure across the seal element.

The patent to Whitener discloses that it is known in the art to employ a "vent hole" 82 connecting a seal 62 retaining pocket to the upstream and downstream sections of the conduit for the purpose of balancing the effect of fluid pressure on the seal to prevent the effects of fluid flow from extracting the seal element from its retaining pocket.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Cornelius, as modified by Pulling, a vent hole in the seal retaining pocket therein, connecting the seal pocket to the upstream and/or downstream section of the flow conduit for the purpose of balancing the effect of fluid pressure on the seal to prevent the effects of fluid flow from extracting the seal element from its retaining pocket as recognized by Whitener.

Claims 88 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornelius in view of Pulling as applied to claim 83-86 above, further in view of Lamb.

The patent to Cornelius, as modified by Pulling, discloses all the claimed features with the exception of having the seat element comprise a polymer of "TEFLON®", "NEOFON®" or "VITON®" material.

The patent to Lamb discloses that it is known in the art to employ "VITON®" as a seal element 55 for the purpose of accommodating particular types of fluids in which the specific material "VITON®" will withstand.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Cornelius, as modified by Pulling, "VITON®" as the material for the seat element for the purpose of accommodating particular types of fluids in which the specific material "VITON®" will withstand as recognized by Lamb.

Regarding applicants remarks as they may apply to the above, the argument concerning leakage of fluid pressure across the threaded connection of Pulling is moot. The threaded connection of Cornelius between elements 46 and 49 is not exposed to the high-pressure zone at the inlet in view of the blind bore in element 49 threaded to the threaded end 46 of the valve stem. As such fluid pressure cannot get behind the seal element of the device of the proposed combination and effect "ballooning" of the seal as argued.

Concerning claim 88, the utility of the material claimed is not in question, As applicant specifically claimed the material to be used in the claimed device, so to does Lamb disclose the same material for the purpose noted. The specific argument that the use of "VITRON®" material is "susceptible to deleterious combustion effects and unacceptable wear" is moot in view of the claim expressly reciting the material.

Claims 89 and 90 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz et al. in view of Pulling.

The patent to Schmitz et al. discloses an "apparatus for regulating the flow of a gas between a high-pressure zone (e.g. the inlet) and a zone of lower pressure (e.g. the outlet), said apparatus comprising: a hollow body (10) having an axis; an adjustment handle (36); a first chamber (read at the outlet 18) and a second chamber (read at the inlet 12), said chambers defined within said body (10); a nozzle (read on the surfaces of the passageway 16 as the cross section presented to fluid flow is decreased relative to that at the inlet) within said body and separating said chambers, said nozzle having a minimum diameter (at the smallest cross section thereof) defining a passage (at 16) for the passage of gas between said chambers; and a stem (22) movable axially within said passage and comprising: a distal portion (any portion of stem 22) having a diameter less than said minimum diameter of said nozzle, said distal portion extending at least partially into said first (outlet) chamber; a proximate portion (the remainder of stem at head 24), within said second (inlet) chamber,... extending into said passage (16), wherein axial movement of said stem (22) varies the position of said proximate portion in relation to said nozzle; and (the valve head 24 is) contactable with said nozzle to seal said passage against the passage of gas" as recited in claim 89.

Thus the patent to Schmitz et al. discloses all the claimed features with the exception of having "an o-ring seat between said proximate portion and said distal portion of said stem and contactable with said nozzle to seal said passage against the passage of gas" wherein said distal portion is removably connectable to said proximate portion of said stem.

The patent to Pulling discloses that it is known in the art to employ an o-ring seat 9, between a threaded together proximate portion 2 and a distal portion 4 of a valve

stem and contactable with a nozzle or fluid passageway within seat 5 to seal the passage against the passage of fluid, wherein, the distal portion and the proximate portion receive the o-ring seat 9 for the purpose of perfecting fluid tight closure of the valve head against the valve seat.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Schmitz et al. an o-ring seat between a threaded together proximate portion and distal portion of the stem 22 and contactable with the nozzle to seal the passage 16 against the passage of gas; wherein the distal portion is removably connectable to the proximate portion of the stem 22 for the purpose of perfecting fluid tight closure of the valve head against the valve seat as recognized by Pulling.

Regarding claim 90, in Schmitz et al., "said proximate portion of said stem (at minimal diameter section stem 22) comprises a threaded means (at 46) for separably attaching said stem (22) to said adjustment handle (36), said threaded means comprising barrel means (at the lower end of thread 42 and the upper surface of gland 30) for containing thread wear debris" as recited.

Regarding applicants arguments relative to the above, the argument that the now claimed "minimum diameter" supports "top down assembly" is also moot. It is noted that the features upon which applicant relies (i.e., method of assembly) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claims 91-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz et al. in view of Pulling as applied to claims 1, 47-50, 83-86 and 89 above, further in view of Sebenste.

The patent to Schmitz et al., as modified by Pulling, discloses all the claimed features with the exception of having a guide pin received within a guide hole and a threaded "means" separately attaching the handle to the stem including a closed end barrel to collect debris.

The patent to Sebenste discloses that it is known in the art to employ a "guide pin" at 25 received within a guide "hole" at the groove 26 for guiding reciprocating movement of the valve without rotation of the valve head and a separate threaded "barrel" at internal threaded bore 13 for the purpose of non rotationally reciprocating the valve element and to collect debris at the bottom of the "barrel" from the actuator threads.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Schmitz et al., as modified by Pulling, a guide pin and cooperating hole and a separate threaded barrel for the purpose of non rotationally reciprocating the valve element and to collect debris at the bottom of the "barrel" from the actuator threads as recognized by Sebenste.

Claims 1, 42-68 and 70-82 are allowed.

Claim 93 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 78-82 are also objected to under 37 CFR 1.75 as being a substantial duplicate of claims 1, 42-44 and 46, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). As there is

no difference in scope between the respective claims, one set is considered to be duplicative of the other.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John Rivell

John Rivell
Primary Examiner
Art Unit 3753

j.r.